CHAPTER 5: CHANGES IN INSTRUCTION FOR THE CLASS OF 2005 AND BEYOND

Introduction

The assessment of standards-based instruction presented in the preceding two chapters is mixed. Schools have greatly increased coverage of the California Content Standards at both the middle/junior high school and high school levels and all high schools surveyed have introduced programs to help students who do not initially pass the CAHSEE. The success of these programs for students in the Class of 2004 has been limited, in part because many students do not yet have prerequisite skills and in part because students fail to take full advantage of opportunities available to them. The State Board of Education will have to weigh these mixed results in deciding whether to continue or defer the requirement that students must pass the CAHSEE to receive a diploma.

A key question for the Board to consider is whether evidence for the effectiveness of standards-based instruction will be better in the coming years. In this chapter, we examine the implementation of standards-based instruction for the high school Class of 2005 and later classes. We have used CAHSEE passing rates as key evidence for the effectiveness of instruction for the Class of 2004. Unfortunately, information on passing rates is not yet available for subsequent classes, although preliminary results from the March 2003 administration to the 10^{th} graders who are in this class will be available to the Board before it must make a final decision about deferring the exam.

Increasing Coverage of the Content Standards

Results presented in Tables 3.3 through 3.6 indicate that coverage of the California Content Standards in the middle-grade feeder schools and coverage of the specific standards assessed by the CAHSEE at the high school level has increased steadily over the past four or five years. Further, results presented in Table 4.3 indicate a time lag between the implementation of standards-based instruction and higher passing rates on the CAHSEE. Taken together, these results suggest that passing rates will improve for the Classes of 2005 through 2008 several years after significant increases in coverage of the standards. In mathematics, for example, passing rates increased by about 10 percent for each additional year that high coverage levels had been reached. The earlier “adopters” may have had other advantages, so actual increases from this factor alone are likely to be somewhat less. Yearly gains even half this large would be substantial.

Further evidence for improved prospects for later classes is provided by reports from middle-grade feeder school principals on the proportion of students taking Algebra, or at least pre-algebra courses, prior to entering high school. Table 5.1 shows estimates of the percent of 8^{th} graders taking some Algebra last year, this year, and next year. Over this 3-year period, the percent of students reported to have not taken even a pre-algebra course—teaching prerequisite skills for Algebra—dropped from 14 percent to only 5 percent. At the same time, the proportion of students who took some Algebra increased from 46 percent to 67 percent.

Table 5.1 Percent of 8th Graders Taking Algebra

School Year	High School Class	Percent Whose Highest Level is: None	Pre-Algebra	Algebra A (1 of 2 years)	Algebra 1 (1-year course)
2001–2002	2006	14%	38%	22%	26%
2002–2003	2007	8%	32%	30%	30%
2003–2004 estimated	2008	5%	28%	30%	37%

Note that analyses of the content of the mathematics section of the CAHSEE suggest that students have roughly equal difficulty with questions from each content area, not just with the Algebra questions. In adopting the content standards covered on the CAHSEE, the Board intentionally excluded more advanced Algebra topics. Nonetheless, an Algebra course represents the culmination of the sequence of courses that cover the mathematics content standards on the CAHSEE. Students who have completed Algebra are likely to have had instruction covering all of the mathematics standards while students who have not completed Algebra have not. Earlier analyses of mathematics passing rates for students who have or have not completed Algebra (Wise et al., 2002a, Wise et al. 2002b) indicate a clear and consistent relationship between completing Algebra and passing the CAHSEE mathematics exam.

Standards, Aids, and Accountability

Efforts to encourage implementation of standards-based instruction and to hold both schools and students accountable for achievement outcomes have progressed rapidly over the past several years. The adoption of the CAHSEE by the SBE in October 2000 is just one step in the process that includes both support and accountability measures.

Table 5.2 provides a framework for presenting key timeline information. The basic question is where in the schooling process the Class of 2004 (and subsequent classes) was when key provisions were enacted or put in place. A key example is that the requirement that students take Algebra was enacted when the Class of 2004 was already in the 9th grade. Given that many students first needed to take pre-algebra or other preparatory courses and that Algebra has become a two-year course for many students, it is thus likely that some students in the Class of 2004 would not be able to complete Algebra before the 12th grade.

As shown in Table 5.2, the Class of 2004 was already in the 6th grade when the current California Content Standards for English-Language Arts and Mathematics were adopted. While these students completed five grades before standards for those grades were adopted, it is likely the instruction they did receive covered most of the standards for those grades that were subsequently adopted.

Table 5.2 Timeline of Key Events

Event	Date	Grade in School at Time of Event				
		Class of 2004	Class of 2005	Class of 2006	Class of 2007	Class of 2008
Adoption of State Content Standards	December 1997	6	5	4	3	2
Funds Provided for Adoption of Aligned Textbooks	1998–99	7	6	5	4	3
Identification of Textbooks Aligned to State Content Standards	1999	8	7	6	5	4
Adoption of ELA and Math Frameworks	1999	8	7	6	5	4
Adoption of CAHSEE Blueprints	December 2000	9	8	7	6	5
Adoption of Standards-Aligned Instructional Materials for Math	January 2001	9	8	7	6	5
Enactment of Requirement to Take Algebra	2001	9	8	7	6	5
Adoption of Standards-Aligned Instructional Materials for ELA	January 2002	10	9	8	7	6
Inclusion of CAHSEE Results in Academic Performance Index (API)	Fall 2002	11	10	9	8	7
Web Posting of ELA and Math Teacher Guides	September 2002	11	10	9	8	7
Enactment of Testing Accommodation Regulations	July 2001	11	10	9	8	7
Release of CAHSEE Remediation Guide	December 2002	11	10	9	8	7
Release of CAHSEE Student Guides	Pending	11	10	9	8	7

As indicated in the timeline, the Class of 2006 will have several advantages over the Class of 2004. These include:

- Adoption of aligned textbooks occurred by the time they were in 7th grade, so they were more likely to receive standards-based instruction at the grades targeted by content standards covered on the CAHSEE.
- They were also in the 7th grade when the requirement to take Algebra was enacted, so they had more time to take prerequisite courses before reaching high school.
- High schools were being held accountable for CAHSEE passing rates when these students were in the 9th grade.
- Teacher and Remediation Guides were completed when they were in the 9th grade (compared to 11th grade for the Class of 2004).
- They will have the new Student Study Guides before having to take the CAHSEE in the 10th grade.

Students in the Class of 2008 will have a number of additional advantages, including:

- They went through nearly the entire elementary school curriculum after the California Content Standards were adopted.
- Aligned ELA and mathematics textbooks were identified and, in most districts, adopted for use before these students reached 7th grade.
- High schools will have two years of accountability results that include CAHSEE passing rates before students in the Class of 2008 enter high school.

How Much Improvement is Needed?

While there are no clear standards for minimally acceptable passing rates, rates approaching 90 percent for most students would be a reasonable target for individual schools. This goal might translate into a rate of nearly 95 percent for the state as a whole. In June 2003, the State Board of Education will have an opportunity to consider initial results for the Class of 2005. An important question is how to use that information to estimate what the passing rates could be by the time students in this class reach their senior year.

Figures 5.1 and 5.2 show how cumulative CAHSEE ELA and mathematics passing rates for the Class of 2004 have increased across successive administrations. Another point can be added to each line when results are available for 11th graders who tested in March 2003. There is still considerable white space on the right side of these figures, to be filled in over seven or eight more administrations for the Class of 2004. Without a very significant change, it is unlikely that the passing rate for mathematics (Figure 5.2) will reach 80 percent. Reaching higher levels will require either: (a) initial passing rates by the end of 10th grade that are about 15 points higher than the rate for the Class of 2004 at that point or (b) steeper slopes resulting from more effective remediation for subsequent classes.

Another way of tracking likely progress for subsequent classes is to continue to track changes in factors that have been found to be related to passing rates. For example, how

many students in subsequent classes have completed Algebra by the end of the 9th or 10th grade? How much further will coverage of the content standards increase at both the high school and middle-grade feeder school levels? In addition, will the level and effectiveness of professional development activities related to teaching the content standards increase?

Overall, rather large changes may be needed, and it is unlikely that changes of this magnitude will be realized in a single year. In fact, current budget problems could lead to cutbacks in key programs leading to a decrease rather than an increase in the passing rates.

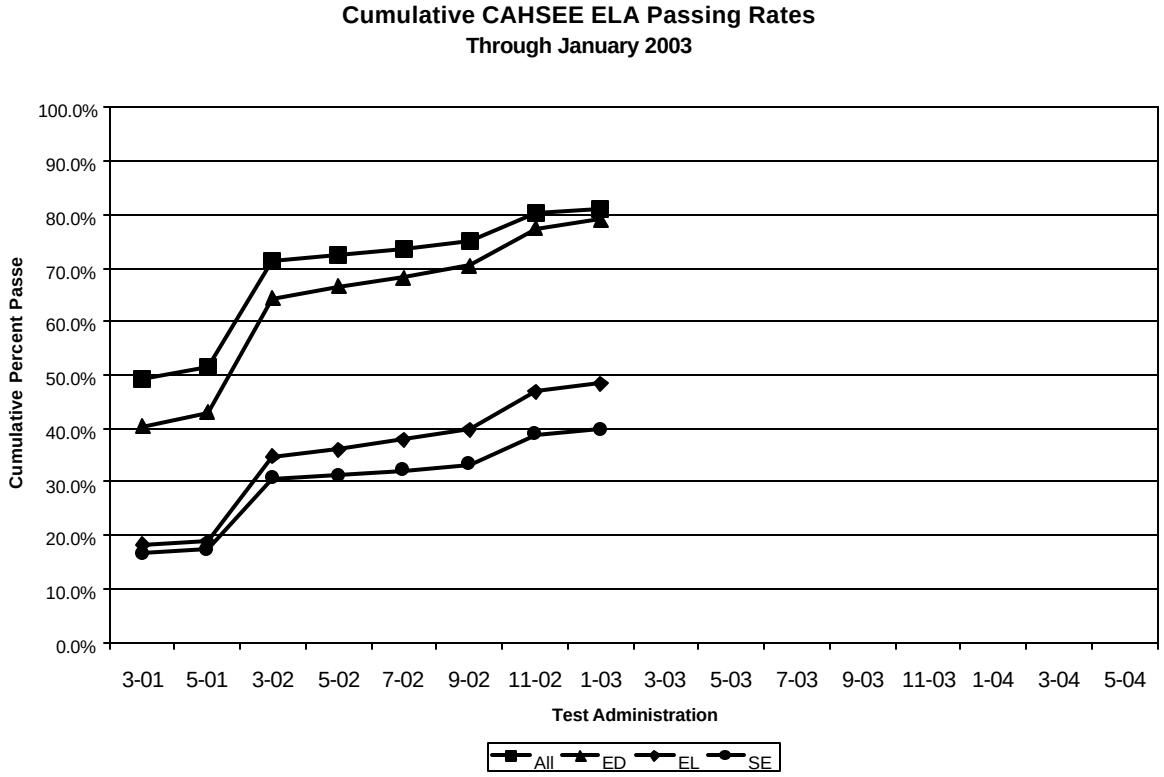

Figure 5.1 Cumulative CAHSEE ELA Passing Rates
For All Students (All), Economically Disadvantaged Students (ED), English Learners (EL), and Special Education Students (SE)

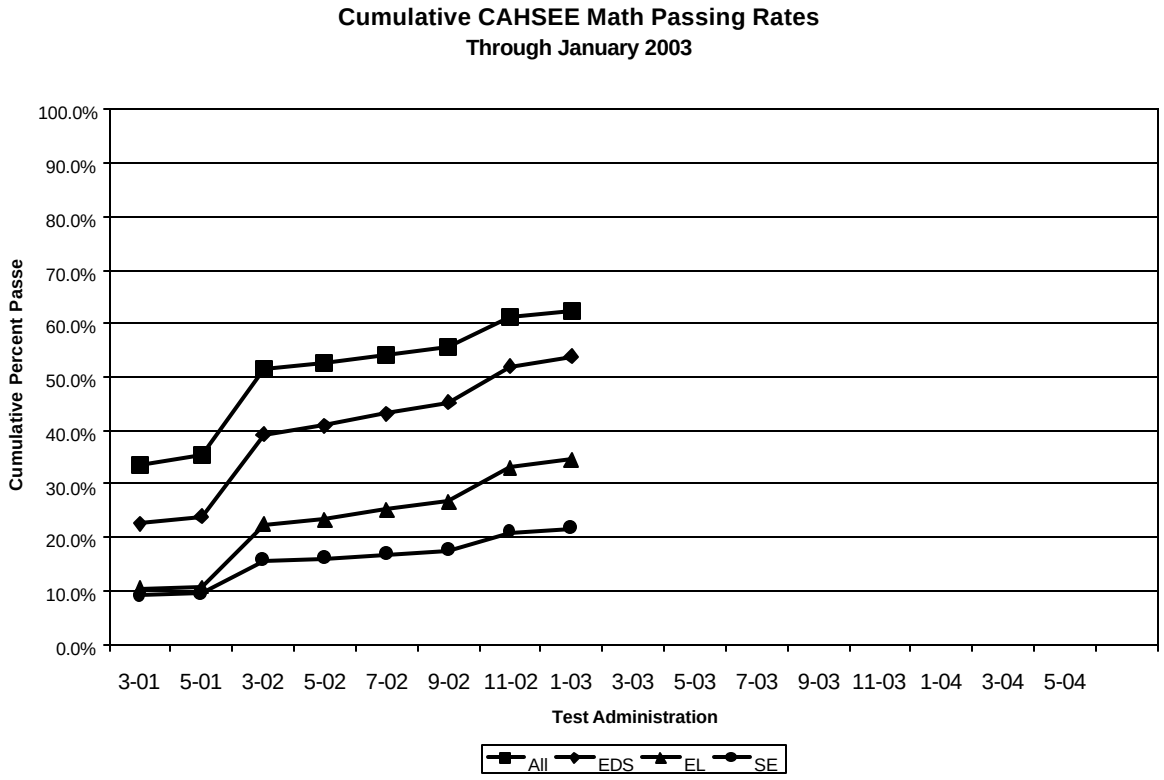

Figure 5.2 Cumulative CAHSEE Mathematics Passing Rates
For All Students (All), Economically Disadvantaged Students (ED), English Learners (EL), and Special Education Students (SE)

Summary

There are a number of indications that instruction has improved (and will continue to do so) for students entering high school after the Class of 2004.

- The proportion of students having taken Algebra, or at least pre-algebra, in the middle school is increasing.
- New courses have been added, along with additional professional development for teachers of these courses.
- Textbooks aligned to the standards have been selected and put into use.
- An increased number of remedial courses have been implemented, and teachers have gained more experience in teaching these courses.
- The CAHSEE Study Guide will be available to students in the Class of 2005 after their sophomore year (and to their teachers and parents) and to students in subsequent classes before they take the CAHSEE for the first time as sophomores.

There is no way of knowing with any certainty how much higher the passing rates will be for succeeding classes. Results from the March 2003 administration to the Class of 2005 should be available to the Board in June. These results will provide the first indication of the possible rate of improvement for subsequent classes.